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AN INVESTIGATION OF SEX ROLES AND LOCUS OF CONTROL THAT
INFLUENCE FEMALE LEADERSHIP CAREER INTENTIONS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology:
Industrial/Organizational

by
Kendall Teague Kerekes
June 2002

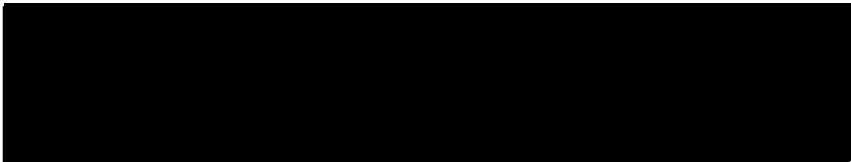
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Approved by:


Dr. Janelle Gilbert, Chair, Psychology

5/31/02
Date


Dr. Yu-Chin Chien


Dr. Jan Kottke

ABSTRACT

For many years, the intangible "glass ceiling" has continued to be a barrier for women in business. Research has repeatedly attempted to uncover the justification for sexual discrimination in the workforce, striving to find where the "weaknesses" of women in the management ranks resided. However, no significant differences in leadership abilities between males and females in executive positions emerged. Because masculine sex-role orientation has consistently surfaced as being a predictor of leadership success, and internal locus of control has repeatedly been shown to be strongly related to the masculine sex-role orientation, this present study attempted to uncover whether leadership career intentions and masculine sex-role orientation were mediated by internal locus of control.

A total of 80 participants from the County of San Bernardino completed surveys regarding their personality characteristics on a Sex-Role Orientation Scale, their area of control on a Locus of Control Scale, and their future career intentions on a Leadership Career Intentions Scale. The hypothesized mediated relationship was not supported.

ACKNOWLEDGMENTS

I would like to thank my thesis advisor Dr. Janelle Gilbert for all her persistence, expertise and most of all patience, throughout the process of finalizing my thesis topic, completing it on time, and life's curveballs in general. I greatly appreciated her ability to have faith in me and to articulate the thoughts I could not, which provided me my vision for this project. She has given me the confidence that I can someday juggle my career, husband and children in an eloquent fashion. I would like to thank my entire thesis committee as well, Dr. Janelle Gilbert, Dr. Yu-Chin Chien, and Dr. Jan Kottke for providing me with their expertise and time so that I was able to complete my Master's Degree in its entirety. I would like to extend a special thank you to Mrs. Gloria Affatati, the Director of the Training Department at the County of San Bernardino, who gave me the ability, in many aspects, to accomplish my thesis, educational, and career goals. To my I/O faculty, I would like to thank them for their time, education, smiles, and the guidance they gave me that will guide me through my dreams of today and obstacles of tomorrow. And, last but not least, my Industrial Organizational Team: Kevin, Hedieh, Lisa, Jayme, Lindsay, Vy, Veronica and finally, Lawrence. Without this crew, I never would have made it!

DEDICATION

To my incredibly loving and supportive husband,

Thank you.

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CHAPTER ONE

REVIEW OF THE LITERATURE

Research suggests that regardless of the mandate against sexual discrimination in 1964, corporate women today continue to battle for equality in the corporate world. However, this battle is a bit different. Whereas women in the 60's were fighting to gain entrance into the business industry, women today are now fighting to move up the corporate ladder. In the 1990's, thirty years after the Civil Rights Law passed, only slight percentages of females actually made it to management positions and even less had reached the executive level. The Demographic statistics from the 2000 Census showed men making up only 49.1% of the U.S. population (Census, 2000). However, when examining advanced corporate positions, those 49.1% still dominate the business arena. Some of these statistics included males comprising 85% of tenured professors and partners in law firms, 97% of school superintendents, and over 95% of Fortune 500 CEOs (Benokraitis, 1997). Some have accounted for these differences as being due to societal necessity and yet others still cling to the discriminatory notion that women just do not have what it takes to be in business. The history of why many in

business maintain the belief regarding female inadequacy in corporate America, and the advice that has been given to help females advance in the workplace will first be addressed. But, the focus of this research proposal will be in the investigation of a possible explanation for female corporate advancement that has yet to be examined.

Pre World War II

Prior to World War II, the traditional sex roles of males and females were established on the basis of biological differences. Because women were the only ones who could bear children, the fact "of maternity shaped the traditional roles of the sexes. Women performed the home-centered functions that related to the bearing and nurturing of children. Men did the work that required great physical strength" (Schwartz, 1989, p. 613). As time progressed, our society developed shared expectancies for the "appropriate" behaviors and characteristics "associated with specific social positions... and each role identity was a reflection of society within subjects" (Echabe & Castro, 1999, p. 290). Since males were defined as the "breadwinners" for the family, the masculine identity became linked to the attributes required for the job such as risk taking, aggressiveness, competitiveness,

and self-reliance. And, due to the nature of childbearing and raising a family, the female identity became associated with characteristics that were needed to be a mother: sensitivity, care-taking qualities, intuition, communication and emotional supportiveness (Echabe & Castro, 1999; Schwartz, 1989), hence the recognition of the "traditional" sex roles.

After these roles had been established, "American society...considered masculinity to be the mark of the psychologically healthy male and femininity to be the mark of the psychologically healthy female" (Bem, 1975, p. 634). Therefore, at early ages boys were taught to value a career and the proper behaviors associated with their masculine sex role. Girls were raised with the belief that family and marriage should be their priorities and were reinforced for exhibiting the appropriate feminine characteristics (Schneer & Reitman, 1995). Accordingly, during the course of this sex role socialization process, boys and girls suppress any behavior that might have been inappropriate for his/her sex role in order to "keep the behavior consistent with ...the...internalized sex role standard" (Bem, 1975, p. 634).

Post World War II

After World War II, males were again reinforced for being the "breadwinner" and females for being the "mother." Hence, the corporate culture created was based on those who filled the business chairs: men. For that reason, the "way business was done" and how one advanced, was formed around those "masculine" attributes men had been taught to emulate, and which only they possessed: autonomy, independence, achievement, status, long hours, dedication and financial compensation (Long & Martinez 1994). Thus "stereotypically, when men chose a...career, they were following an accepted pattern and they brought an understanding of the 'rules' for success. When women chose a career, they were breaking with tradition, and brought qualities that were not necessarily valued in that career, and they did not always know the 'rules' for success" (Shneer & Reitman, 1995, p. 292). Due to the feminine characteristics anointed to all women by our American Society, men assumed that none of them were capable of performing successfully in the business world and did not possess any qualities that could significantly add to it (Powell, 1999).

However, something extreme had been overlooked. Because many women had filled the men's positions while

the men were in battle during World War II, this assumption of their inadequacies in the new industry was not well received. Because the war had forced many "housewives" into the business world for our economy's survival, many women felt they had proven themselves; America still flourished when the soldiers returned. However, these men did not see the numerous women who demonstrated the "masculine" qualities of self-confidence, independence and drive that aided them in their corporate success. Unfortunately, when the soldiers returned from duty and assumed their natural "breadwinner" roles, few realized that many of their "housewives" now felt a sense of power and confidence in their abilities. These women no longer believed that their worth and potential was limited to the boundaries of a "house-hold." This new revelation went against the traditional expectations of a woman, but because societies expectation of these women gave them the means to exercise the qualities they naturally identified with, a new type of woman had been created: the Modern Woman (Long & Martinez, 1994). Unfortunately, due to our steadfast societal beliefs, America was not prepared for her.

Women in Corporate America

After our new corporate world had been established, the men continued to hold the traditional assumption that women did not possess the qualities to succeed in business. These views lead to the open selection policies that denied women jobs due to their sex. Not surprisingly, the Women's Liberation Movement was not far behind. This movement resulted in legislation passing the Civil Rights Act of 1964. This new legal decision was intended to force employers to leave their "discriminatory" hats at the corporate doors, and begin hiring individuals based on qualifications not sex. Women were finally allowed their long awaited rights of passage into the business world.

As time progressed, the needs of our society changed again opening yet another door for women in business. In the late 1970's and early 1980's, Deindustrialization occurred, which shifted our previous manufacturing driven economy into one based on customer service (Brush, 1990). This transformation occurred quickly due to technological advancements "eliminating much of the need for muscle power at the workplace...family size contracted, and the community assumed greater responsibility for the care and education of the children" (Schwartz, 1989, p. 613). One downside to this shift was the decrease in revenue, which

forced many companies to make severe financial changes, and, unfortunately these modifications came in the form of downsizing. The lack of need for the "muscle-power" of American men left many unemployed and faced with a situation that society had never presented before. One family "breadwinner" could no longer support an entire family in the new economy; therefore, the societal distribution of traditional roles: men work and women have children, had to change. In order for the household to be maintained, both parents needed to be sent into the workforce (Brush, 1990).

Based on the literature provided, one would assume that because women were needed in this rapidly expanding industry, the statistics of females holding higher positions would increase as well. However, this was still not the case, some women had advanced, but the percentages did not match the societal shift. In an attempt to find an explanation for this phenomenon, researchers began examining those women in the higher positions and how their leadership skills differed from the men. When these females were studied, many differences were seen; however, not in the direction that was anticipated. These females were found to put in longer hours, work harder assignments, demonstrate higher abilities, necessitate

more education, expect no "breaks", and put off having children in order to prove they were "one of the boys" (Schneer & Reitman, 1995; Mainiero, 1994). These findings seemed to warrant the recognition that women could be competent within our businesses, but due to the small numbers of females who exemplified these outstanding behaviors, the perceptions of women in leadership continued to be poor. Studies continued to find support for women's lack of representation being due to males' lack of confidence in their leadership abilities and skills for business management (Dickerson & Taylor, 2000).

Therefore, many researchers felt that until these external societal factors changed: the traditional belief systems, economic restructuring, the awareness of female value, etc.; female advancement would continue to be difficult (Martin & Collinson, 1990). Unfortunately, the distinctive undertone conveyed to women was that if they waited long enough, society would continue shifting, and at some point the glass ceiling would be removed. But, this notion was unacceptable for those females already in Corporate America and attempting to move up the corporate ladder. Moreover, the females of our society saw that some women had already removed the glass ceiling and advanced into leadership roles and supervisory positions.

Therefore, the concept for these businesswomen to wait until society changed was overlooking a large component: the power of the individual. The female who had reached these executive roles did not wait until society changed; they changed a portion of society.

Based on the history of sexual discrimination found in the corporate world, researchers have attempted to find a rational justification for why this phenomenon had occurred. To many, examining gender differences in leadership style to uncover the "weakness" in the female leadership ability seemed to be the most plausible avenue of exploration. There had to be a reason behind why these women weren't succeeding that warranted the scarce existence of them in the executive ranks. However, much to their dismay, the differences that were anticipated to exist did not emerge.

Regardless of the traditional socialization expectations that were held for men and women, "no consistently clear pattern of differences could be discerned in the supervisory styles of female and male leaders" (Bass, 1990, p. 723). A study by Muldrow and Bayton (1979) gave 100 males and females in middle management six personnel decisions to handle, yet no significant differences were found. When the type of

power, coercion vs. withdrawal, utilized between genders was examined, males and females had strikingly similar preferences (Michener & Schwertfeger, 1972). In the allocation of rewards or punishments looked at by Baker, DiMarco, and Scott (1975), a simulated work setting was developed and no significant differences were found in the style of distribution that was employed. Interestingly, no sex differences were uncovered when the initiation of structure or amount of supervisory consideration utilized were studied either (Osborn & Vicars, 1976).

Based on the lack of significant individual differences found between men and women in leadership, it was clear that the justification that was feverishly being sought after was non-existent. However, by approaching this phenomenon from an angle that examines the "perceptions" of these women in corporate America, answers regarding why the glass ceiling remained became more apparent. Throughout the literature, studies have shown that the success of males and females was not due to differentiating abilities, but differing perceptions shared by colleagues, supervisors, and employees regarding leadership abilities attributed to males or females solely based on gender. When leadership abilities were controlled for, the only differences that emerged were the

perceptions of how these employees managed. These perceptions, regardless of identical abilities, conveyed the notoriously stereotypical beliefs held about men and women in business: Men were fit to be leaders in the business arena, and women were not cut out to play the corporate game. These perceptual differences emerged in many different ways.

When Dobbins and Platz (1986) compared eight different male vs. female leadership performance studies, they found no significant differences on the Leadership Behavior Description Questionnaire, LBDQ. These results provided additional evidence that the abilities of male and female leaders are not dissimilar. However, they did find that when the issue of "leader effectiveness" came into question, regardless of the LBDQ score, men were perceived as being significantly more effective. Perceptual differences have also been found when the same behavior is evaluated differently based on gender. A study by Hansen (1974) showed that men and women supervisors had no significant differences on two specific leadership abilities: support and goal facilitation. But, when their subordinates were assessed, the satisfaction of those supervised by females was much lower.

Further evidence of these differing perceptions was found by Denmark (1980) in a study of student perceptions of male and female professors. This study utilized a hypothetical male and female professor who had written an "outspoken" letter in response to a comment made in a faculty meeting. Then, over 300 students' reactions were assessed. Regardless of the "outspoken" style being favored by these students, the female professor was conveyed as being "less of a leader, less interesting, less sophisticated, less strong, and less fair than her male counterpart" (Bass, 1990, p. 726).

These findings suggest that the differences between male and female leaders is not due to differences in ability, but a matter of the stereotypical perceptions and expectations held by both men and women in our society. And, there is some evidence that one consequence of these negative perceptions for females in corporate America is the effect they have on females' own perceptions about their leadership abilities (Brehony & Geller, 1981). Therefore, it is possible that how females react to these perceptions, which lie in individual differences, could be a determining factor in whether a female persists in spite of these stereotypical perceptions and takes action to successfully advance (Echabe & Castro, 1999).

So, the question is not "How do females differ from men in their ability to be a leader", because as we have seen, males and females have not been found to have significantly different leadership abilities. The question this project will address is what individual differences have aided these females in believing strongly enough in their own abilities to persist in their intentions to succeed.

To uncover what individual differences may play a role in altering stereotypical beliefs about females in business, the point where females even have the opportunity to amend these incorrect perceptions must first be examined. To do this, one must examine the "traditional" discriminatory exchange which can be viewed somewhat as a process. It begins when an individual administers the sexual discrimination, and continues when the party intended to receive the traditional views receives the information. After the discriminatory views are conveyed, the receiving party either internalizes or disregards these stereotypical beliefs. And finally, after all these have occurred, the receiving party exhibits follow-up behavior. The third and fourth component of this exchange, how a woman responds to the discriminatory comments and the behavior that follows, may account for

differences in intentions to succeed as a leader (Echabe & Castro, 1999).

To support differences in intentions to succeed may occur, research has indicated, "it is the women's sex-related traits and behaviors which are defined" (Reavley, 1989, p. 56) as why the glass ceiling still exists to many in the business world. Therefore, the assumptions regarding females in the corporate world are still misperceptions regarding gender assumed traits such as: females are "not stable, rational, independent, decisive, aggressive or ambitious" (Reavley, 1989, p. 55). So, in order for this "perception" to be changed, it would require a woman to demonstrate characteristics contradictory to the "typical female." She would need to be assertive, independent, aggressive, and competitive which are a reflection of the first individual difference that will be covered: sex role identification (Brehony & Geller, 1981; Styves et al., 1989; Kapalka & Lachenmeyer, 1988).

The "traditional" female characteristics associated with the feminine sex role have been one of the largest obstacles to female advancement throughout the literature. A person's sex role is a reflection of the characteristics he/she identifies with, and Bem (1974, 1975) stated that

the characteristics people possess affect their attitudes, behavior and interaction style. Sex-role orientation was originally based on the assumption that a person could only identify with either a masculine or a feminine sex role and that it was gender specific. Females were believed to identify with feminine characteristics such as: affectionate, always thinking of others, compassionate, tender, and warm; the feminine sex role or the "stereotypical female." And, males were believed to identify with masculine characteristics such as: assertiveness, dominance, independence, and competitiveness; the masculine sex role or the "stereotypical male" (Bakan, 1966; Constantinople, 1973).

However, the belief that all women held feminine sex-roles and all men held masculine sex-roles was found to be inaccurate. The literature soon uncovered that men and women had the same range of personal characteristics but could vary on the degree. For example, all men and women were aggressive to some degree and compassionate to some degree, but regardless of one trait being predominantly male or female, it did not implicate that this trait was absent in the opposite sex. So, an individual's personality was actually a combination of "masculine" and "feminine" traits, and which of these a

person identified with more closely determined his/her sex role orientation (Bem, 1974; MacKie, 1977; Reavely, 1989).

Therefore, the "traditional" sex roles that have been perceived to accurately describe all men and women are just an example of a certain sample of females who identify with the feminine sex role characteristics, and a portion of males who identify with the masculine sex role characteristics (Kapalka & Lachenmeyer, 1988; Lombardo & Kemper, 1992; Powell, 1999). Based on this, women have the capacity to possess those masculine characteristics required to succeed in the business world such as aggression, competitiveness, etc. which have historically been attributes only males could possess. So, both males and females have the capability of possessing the same characteristics required to be an effective leader.

This provides further support for the findings that males and females in leadership positions do not significantly differ in their abilities. Because characteristics tied to success are not gender specific, it would only make sense that successful leaders would not have significant differences. In addition, the literature has provided support that successful female leaders, and those who seek out advancement opportunities "are more likely to fall within what is considered the 'male' range

on measurement of personality traits and behaviors" (Reavley, 1989, p. 58). Beginning in 1975, Schein supported the speculation that successful women managers' are "perceived to possess those characteristics, attitudes, and temperaments more commonly ascribed to men in general than to women in general" (p. 340; Sachs, Chrisler, & Devin, 1992). These results provided evidence that females who possessed more "masculine" qualities would find success in traditionally male occupations.

In addition, a leadership study by Kapalka and Lachenmeyer (1988) found that females employed in leadership-status positions possessed highly masculine characteristics, and research by Mainiero (1994), which examined executive level females, obtained similar results. Mainiero (1994) assessed fifty-five high profile executive women, and found that over 80% of the females had been identified as "potential candidates for promotion" by their executive management because of the risk taking, "hard work, innovative problem-solving skills, and sheer initiative" (Mainiero, 1994, p. 56) they demonstrated on the job.

Waddell (1983) provided further support for this notion in his study comparing female business owners and managers with secretaries. The business owners and

managers were found to be significantly higher in their "masculine" sex roles, and attributed their success to the fact they were "ambitious, aggressive, self-reliant, independent, competitive, made decisions easily, exercised authority, accepted leadership, took risks, were willing to stand by their convictions and analyzed relevant factors as well" (p. 295). And, in 1992, when researching personal characteristics of women in management, Sachs, Chrisler and Devlin found that the majority of women managers possessed highly masculine characteristics. In addition, they provided evidence that ability and masculine characteristics were significant predictors in determining which females would choose and succeed in non-traditional careers.

So, females who demonstrate the characteristics of masculine sex-role orientation have the potential to persist in spite of stereotypical perceptions. They are exhibiting qualities contradictory to those a "traditional" woman is supposed to possess, and are in fact showing those personality traits characteristics of a successful and dependent business leader (Reavley, 1989).

In addition to a woman demonstrating those masculine characteristics correlated to success in business, females who exhibit greater confidence in social settings, take

more initiative to attain goals, show greater tendency to seek information and adopt behavior patterns to facilitate personal control have also been found to advance successfully in the corporate world. These types of behaviors have been found in individuals who have a certain type of locus of control, which is the second individual difference that will be discussed (Kapalka & Lachenmeyer, 1988). The concept of locus of control suggests that people have a general tendency to believe that the control over the events in their lives is either external or internal (Brown & Marcoulides, 1996, p. 858). Those people with an internal locus of control tend to believe in their own ability to control events, while those with an external locus of control tend to believe that other people, fate or events are the primary influence on their own circumstances" (Kapalka & Lachenmeyer, 1988, p. 418).

However, much like sex-role orientation, some researchers believed that a person's locus of control was determined by his/her gender. Males were thought to predominantly possess an internal locus of control, whereas, females were believed to possess a more consistent external locus of control (Brehony, & Geller, 1981; Marecek & Frasch, 1977). However, just as the

traditional female and male sex role adherence was shown to be inaccurate, the notion that females only possess an external locus of control was also found to be partially incorrect. Research has found that women can possess an internal or an external locus of control (Marecek & Frasch, 1977). Therefore, just as only some females identify strongly with feminine characteristics, such is the case for those women who possess an external locus of control. And, this project suggests that these findings were a result of women emerging with the capacity to have both masculine and feminine characteristics. The locus of control a female possesses is directly related to her sex-role orientation.

A study by Kuther (1998) which examined this relationship, found that these two variables were so strongly correlated, that locus of control was actually a part of a person's sex role orientation such that "external locus of control is regarded as part of the feminine sex-role, while an internal locus of control is regarded as part of the masculine sex-role" (p. 188). And across the literature, studies have supported this conclusion. The results have consistently shown that females who identify strongly with masculine characteristics have an internal locus of control and

those women with a more feminine sex-role orientation have a more external locus of control (Kuther, 1998; Chia, Moore, & Lam 1995; Cole & Cole, 1974; Minnigerode, 1976; Pleck, 1978; Rychman, Martin, Rodda, & Sherman, 1972; Sanger & Alker, 1972; Baker & Terpstra, 1986).

To further solidify this relationship, and based on the previous findings that successful women in leadership identify strongly with masculine characteristics, a masculine-sex role study that examined locus of control in leadership-positions found no significant differences between women who identified strongly with masculine characteristics and men. Both males and females with a strong masculine sex-role orientation were found to have an internal locus of control. But, those females who had more traditional female characteristics were found to have an external locus of control orientation (Brehony & Geller, 1981; Kuther, 1998).

Therefore, it is not surprising that successful female leaders and females in management have been found to have both strong masculine characteristics and an internal locus of control (Waddell, 1983). This evidence supports the proposal that the combination of a female's sex role identification and locus of control are directly

related to females' success and advancement in the working world (Brehony & Geller, 1981).

To clarify why this relationship is important and extend this connection to leadership career intentions, Burlin (1976) suggested that "the extent to which a woman believes there is a causal relationship between her behavior and a desired outcome is directly related to her willingness to choose nontraditional (male-dominated) careers...those women who choose traditional (female-dominated) careers have an external locus of control and those who choose nontraditional careers have an internal locus of control" (p. 127). The inferences that can be drawn from this are strong. Females who have an internal locus of control will attribute their behavior to their own actions, which are those characterized by their masculine qualities, and continue to pursue their career intentions in the face of adversity. However, those females who have an external locus of control are more concerned with external influences than with their own expectations, and will not attribute their behaviors to their own actions.

The findings of Kapala and Lachenmeyer (1988) further support how this is related to leadership career intentions. They found that a person's sex-role

orientation actually predates the development of a particular locus of control orientation, and that "the locus of control orientation is a function of the degree to which a given individual perceives it as appropriate to utilize behaviors and skills belonging" to their sex-role orientation (Kapala & Lachenmeyer 1988).

Thus, women who identify closely with feminine characteristics and have an external locus of control, by nature of their locus of control orientation, will internalize discriminatory beliefs such as: "women are inadequate" (Dickerson & Taylor, 2000). And, as a result, Evans and Herr (1991) state that when this "process of internalization is complete, the woman feels that she must live up to what is now her own view of what she can and cannot do" (p. 132). This adherence to the discriminatory beliefs about the ability of women in business will lead to a discomfort in climbing the corporate ladder because it is not in alignment with where she feels she is able to perform. Females with this combination of qualities will most likely exhibit lower leadership career intentions.

But, quite opposite, those women who identify more strongly with masculine attributes: independency, selfishness, competitiveness, action oriented, success driven, and aggressive (Lombardo & Kemper, 1992; Powell,

1999), and possess a feeling of personal control over most situations, internal locus of control (Brown & Marcoulides, 1996) should exhibit strong leadership career intentions. Based on the literature, these women would disregard any claims that were not in alignment with their personal belief systems and would remain confident in their own leadership and performance abilities. Females with this combination of traits would be very comfortable in having ambitious career goals and obtaining a non-traditional occupation due to the alignment of their perception and career ambitions.

In summary, sex-role orientation, locus of control, and leadership career intentions are strongly related. Women who embrace a traditional sex role, with an external locus of control "learn to be more compliant, discredit their own abilities, attribute success to factors other than their own competence, and experience anxiety related to fear of competition and comparison" (Long & Martinez, 1994, p. 184; Marecek, & Frasch, 1977). This is parallel to the notion that feminine traits have not been predictive of a women successfully advancing in the corporate world. These women have a stronger potential to internalize sexual discrimination that would lead them to believe they lacked the abilities to perform challenging

tasks (Dickerson & Taylor, 2000). In turn, by believing they lack the skills, they may avoid these types of assignments and turn to less challenging ones (Bandura, 1977). This external locus of control would increase their likeliness of believing the "traditional" beliefs that women lack adequate business skills, subsequently stifling their career intentions and reinforcing the cycle of discrimination.

Those women, however, who identify more strongly with the male characteristics of the modern sex role, maintain a locus of control that is internalized. Due to the strong predictive relationship between masculine traits and internal locus of control, these women believe strongly in their own abilities to perform (Long & Martinez, 1994). These women would likely seek out the challenging leadership assignments instrumental in gaining recognition in order to become more highly visible to the strategic apex, "prove" their worth as employees, and disregard the traditional woman stereotypes (Mainero, 1994). With the combination of more masculine characteristics and a high sense of control over outcomes, strong leadership career intentions would be likely.

Hypothesis

Hypothesis 1: Within a female sample, masculine sex - role orientation is positively correlated with internal locus of control.

Hypothesis 2: Within a female sample, masculine sex - role orientation is positively correlated with leadership career intentions.

Hypothesis 3: Within a female sample, internal locus of control is positively correlated with leadership career intentions.

Hypothesis 4: Within a female sample, masculine sex - role orientation, mediated by internal locus of control, is predictive of leadership career intentions.

CHAPTER TWO

METHODS

Subjects

Eighty-five female volunteers from the County of San Bernardino served as participants. The County of San Bernardino is geographically the largest in the United States and employs over 18,000 people. All participants were chosen from the training classes held at the Performance, Education, and Resource Center (PERC), which are extended only to employees of the county. Participants, who indicated their willingness to participate in the current study, were sampled from six different career development training courses, including the training staff, to ensure a broad and diverse range of females in different careers at different levels of their career: 1) So You Think You Want to be a Supervisor, 2) Celebrate Diversity, 3) Sexual Harassment and Discrimination for Clerical Staff, 4) Management Leadership Academy, 5) Choose Yours Battles, and 6) Fundamentals of Supervision.

The following demographic information was coded and entered prior to analysis: Gender, Race, Number of Employees Supervised, Number of Hours on the Job Per Week,

Highest Education Completed, and Job Title. The mode in which the questionnaire was administered and the percentage of participants gathered from each training course were also coded and entered. The remaining demographic variables were entered as continuous variables and entered prior to analysis: Age, Years Employed with Current Organization, Number of Children under age 6 living at home.

The categorical variables, including mode of questionnaire administration and percentage of participants from each training class, will be reviewed first. 100% of the participants were female. 56.3% of the participants were Caucasian, 22.5% were African American, 15% were Hispanic, and 3.2% were Asian. The majority of the participants, 56.3%, did not supervise any employees, 26.3% of the participants supervised between 1-10 employees, 15% supervised between 11-30 employees, and 2.5% supervised 31-50 employees. 68.8% worked between 31-40 hours per week, 28.8% of the participants worked between 41-50 hours per week, and 2.5% of the participants assessed worked between 51-60 hours per week. The majority of the participants, 41.3%, had obtained a high school degree, 30% of the participants had received a Bachelor's of Science or Arts degree, 16.3% of the participants had

received their Associates Degree, and 8.8% of the participants had received a Post Graduate Degree, either a Master's or Ph.D. Regarding the participants' job titles, 43.8% were supervisors (supervising 1-10 employees), 22.5% were clerical staff, 10% were employment service specialists, 7.5% were staff development instructors, and the remaining participants held various positions throughout the County of San Bernardino.

Finally, 20.1% of the participants were gathered from the training instructors, 17.5% of the participants were gathered from the 'Celebrate Diversity' Class, 15% of the participants were gathered from the 'Fundamentals of Supervision' course, 13.8% of the participants were from the 'Management Leadership Academy', 13.8% of the participants were drawn from the 'So You Think You Want to be a Supervisor' class, 11.3% of the participants were gathered from the 'Sexual Harassment and Discrimination for Clerical Staff', and 8.8% of the participants were from the 'Choose Your Battles' class.

The mean for the age of the participants was 39.49 years, with the age ranging between 21-59 years of age. The median of age was 38 years old, conveying 50% of the sample was above 38 and 50% of the participants were below. And 48.8% of the sample was between the ages of

41-59. The mean for the Years Employed with Current Organization was 6.67 years. And, 73.8% of the participants had no children living with them under age 6, 21.3% had 1 child under age 6 at home, and 5% of the participants had 2 children under age 6 living at home.

Finally, there was a notably elevated percentage of females' who had high scores on the masculine characteristics of the Bem-Sex Role Inventory, specifically 83.8%. Only 12.5% of the females' surveyed had a comparably high feminine score. The remaining percentage of females' contained either high scores on both masculine and feminine sex-role characteristics, androgynous, or low scores on both attributes, undifferentiated.

Procedure

Two different survey modes were used to gather data in this study: Paper-and-Pencil Questionnaires and Computer Based Surveys. Because this study utilized an all-female sample, two all-female training classes, which were taught prior to gaining IRB and thesis committee approval, were asked to participate in the current study. Due to the time differential, all participants who volunteered were informed that they would be contacted at

a later date and would be sent a questionnaire via the County Intranet Computer System.

The remaining participants were gathered in the training classes at the Performance, Education and Resource Center, which occurred after the project proposal was accepted and the Institutional Review Board allowed the study to proceed. These participants were surveyed utilizing a Paper-and-Pencil survey format. 46.3% of the participants received the survey in a Paper-and Pencil format, and 53.8% of the participants received the survey via the County Outlook Intranet.

The procedure utilized for the Computer Based Survey will be discussed first, followed by the process used to obtain the Paper-and-Pencil surveys. The order of the questionnaires was counterbalanced across participants to control for any possible transfer effects.

Computer Based Survey

First, class members were asked to participate in a survey regarding their career advancement intentions. Potential participants were asked at the end of their training class to volunteer to participate, and were informed that a questionnaire would be sent to them via the County Outlook Intranet. The employees' were then asked to mark an asterisk beside their name on the attendance sheet if they

did not want to participate. After a list of all volunteers was compiled, each employee was then sent a questionnaire through the county intranet within their outlook programs.

The body of the intranet message informed the participant that she would be participating in a study related to her career. She was then asked to carefully read and type an "X" by the "Yes" box on the informed consent to participate in the study. The message contained further instructions stating that after the consent form had been marked to fill out the surveys in the exact order they appeared in the Outlook Document, and that the survey process would take approximately 30 minutes. They were asked to fill them out honestly, in their entirety, and to refrain from discussing their answers with other females in the County that may be participants in the study. The message also assured each female that her response was completely confidential, and that all questions could be directed toward me through the intranet or telephone.

A debriefing form was attached to the end of each questionnaire and could not be viewed until they had completed the survey. This form explained the details of the study, its general purpose, and contact information for future inquiries regarding the results. The treatment

of all forty-five employees was in accordance with the ethical standards of the American Psychological Association.

Paper-and-Pencil Questionnaire

First, class members were asked to participate in a survey regarding their career advancement intentions. Potential participants were asked to volunteer to participate and were then given a questionnaire to complete in the classroom. Each employee was then given an informed consent, and was asked to write an "X" next to the box giving their consent to participate before filling out the rest of the questionnaire. The debriefing form was attached to the end of the survey, and as each participant turned in his/her completed questionnaire, the form was removed and handed to the subject. The treatment of all forty employees was in accordance with the ethical standards of the American Psychological Association. After all data were collected, it was scored and analyzed.

Design

In this study, a correlation-regression approach was utilized to test the proposed hypotheses. The predictor variable was the female's Masculine Sex-Role Orientation, the criterion variable was Career Leadership Intentions,

and the mediating variable was the female's Internal Locus of Control. The present study focused on female's intentions for leadership positions in their career and the individual differences in Sex-Role Orientation and Locus of Control. Females' Leadership Career Intentions were assessed by participants utilizing a survey developed specifically for this study; females' sex-role orientation were evaluated by participants completing the Bem Sex-Role Inventory; the Brown Locus of Control assessment tool was also completed by the female participants to measure the individual variable of locus of control. All three variables were quantitative and continuous.

Measures

Locus of Control

The participants' locus of control was rated by using the Brown Locus of Control Scale (BLOCS) (Brown, 1983). This test was designed to address the deficiencies of Rotter's (1966) Internal-External scale measures by adding a third dimension of External influence: Others. It was also developed in accordance to Levenson's Internal, Powerful Others, and Chance Scale but considers the dimension of Powerful Others in a more social context (e.g. friends, boss and other social groups). The scale

used was intended to identify three independent dimensions: 1) Internal - the individual has personal control; 2) External-Social - the individual is controlled by social interaction factors as described previously, and 3) External-Others - fate, chance or an abstract authority are perceived to control situations. However, for the current study, only Internal Locus of Control was utilized to test the hypotheses, and the scores from External-Social and External-Others were analyzed for exploratory purposes.

The participants rated a series of 25 questions on a 6-point Likert-type scale that ranged from Strongly Agree - 6, to Strongly Disagree - 1. The scores from the Internal Locus of Control dimension were totaled and an average score was calculated. The higher the score on this dimension, the more strongly the participant possessed an Internal Locus of Control. The lower the score, the less the participant possessed an Internal Locus of Control (Brown & Marcoulides, 1996). When the exploratory analyses were examined, the dimensions of External-Others and External-Social Locus of Control were calculated in the manner previously mentioned. Sample questions from this measure are: "My friendships depend on how well I relate to others; Accidental happenings have a lot to do with my

life; Rules and practices that have been around for many years should determine what will happen to my life" (Brown & Marcoulides, 1996, p. 862).

A two-week test re-test alpha reliability coefficient was .90 with the internal consistency coefficient alphas for the subscales at .83, .87, and .77. Previous studies have confirmed the three-factor model of the Brown Locus of Control scale with each factor being statistically independent (Brown, 1983; Feldman, 1980; Riccota, 1984) [see Appendix A].

In the current study, the reliability for each scale was assessed. After analyzing the Corrected Item-Total Correlations, it was recognized that Item 9 on the Internal Locus of Control Scale had a negative correlation. Therefore, item 9 was removed and the alpha reliability was subsequently run again with the eight items that remained. With $N = 80$, an Item Mean = 4.81, and Standard Deviation = .55, the alpha reliability was .64.

Next, the alpha reliability for External-Other Locus of control was analyzed. With $N = 80$, an Item Mean = 1.85 and Standard Deviation = .45, the alpha reliability was .56. Finally, the alpha reliability for External-Social Locus of Control was assessed. With an $N = 80$, an Item

Mean = 5.54 and Standard Deviation = 1.67, the alpha reliability was .64.

The current alpha reliability results for the Internal, External-Others and External-Social scores, .64, .56, and .64 respectively, were not consistent with the previous literature conveying consistent reliability scores at .83, .87, and .77, and above, correspondingly. However, regardless of the low scores, they were still within acceptable range to use for the analysis.

Sex Role Orientation

The females' sex-role identification was measured by the Bem Sex-Role Inventory (BSRI). This was a paper-and-pencil test that used a 7-point Likert-type scale ranging from 1 (Never or almost never true) to 7 (Always or almost always true). This instrument includes two subscales: Masculinity and Femininity. The instrument has a total of 60 items. Both the Masculinity and Femininity scales consist of 20 items each, and 20 additional items are present as filler descriptors. Self-reliant, defends own beliefs, and independent are some examples of masculine traits. Examples of female traits are: yielding, cheerful, and flatterable (Bem, 1975). According to the scores on the two subscales, the inventory allows four possible categories of sex-role

orientation to be computed: Masculine (higher score on masculine), Feminine (higher score on feminine), Androgynous (high score on both masculine and feminine), and Undifferentiated (low scores on both masculine and feminine). The specific scores required for each category will be specified in the following paragraph.

The participants were asked to determine how well each characteristic described her. The average score for each scale, masculine and feminine, was computed. A score above 4.3 on femininity and a score below 4.3 on masculinity indicated that the female was "Traditionally Feminine." A score below 4.3 on femininity and a score above 4.3 on masculinity indicated that a female was "Traditionally Masculine." An "Androgynous" female had a score above 4.3 on both femininity and masculinity, and females' who were "Undifferentiated" had a score below 4.3 on both femininity and masculinity scales (Kuther, 1998; Bem, 1975).

The psychometric analyses in previous literature found the Masculine and Feminine scores were empirically independent at $r = -.03$. The assessment tool was internally consistent with an alpha reliability coefficient of .86 with a four-week test-retest reliability of .93 (Bem, 1975) [see Appendix B].

In the current study, only the scores on the Masculine Sex-Role Dimension were considered. With $N = 80$, an Item Mean = 4.93 and Standard Deviation = .68, the alpha reliability for the Masculine Sex-Role Orientation was .88. The Feminine Sex-Role Dimension reliability was also assessed for comparative purposes. With $N = 80$, an Item Mean = 4.85 and Standard Deviation = .24, the alpha reliability for the Feminine Sex-Role Orientation was .83. These results were consistent with the previous literature.

Leadership Career Intentions

Review of the literature showed no leadership career intentions scale; therefore, the Leadership Career Intentions Scale was developed specifically for this project. Twenty-six items were written based on the objective of capturing the participants' intentions to excel to certain levels of leadership in their organization. The responses to these items were measured on two 5-point Likert scales with two sets of response options. The set of response options ranged from 1 (Highly Unlikely) to 5 (Highly Likely) and the second set of response options ranged from 1 (Not at all) to 5 (Completely). Items 1, 7, 8 and 22 were reverse scored. Then, each score was totaled and averaged, with higher

scores representing higher leadership career intentions, and lower scores representing lower leadership career intentions. Sample questions from these scales are: "How likely is it that you would feel uncomfortable if you held a traditionally male occupation, that is, one in which women were a clear minority?" and "To what degree do you create career plans that include multiple promotions?"

A panel of subject matter experts in leadership was utilized to assess each item for construct as well as content validity. The panel also verified the clarity of instructions and questions in the finalized survey. Based on the input from this panel, the appropriate adjustments were made and a pilot test was run. 15 employees from the County of San Bernardino were used as participants for this pilot test. Four items were deleted in the original survey: item 1, item 3, item 7 and item 26. The alpha reliability with all four previously mentioned items deleted was $r = .92$. The reliability for alpha if item deleted did not significantly increase by removing additional items (see Appendix C).

In the current study, after reverse scoring items 1, 7, 8, and 22, the alpha reliability of all twenty-two items were tested. With $N = 80$, an Item Mean = 3.65 and Standard Deviation = .66, the alpha reliability was .90.

Because this scale was developed specifically for this project, the only comparison data applicable to these results were those from the pilot study, which reared similar findings with an alpha reliability of .92.

Demographic Page

Lastly, a demographic assessment tool was administered. The survey included questions regarding gender, racial/ethnic composition, age, number of employees supervised, number of hours on the job per week, highest education completed, job title, years employed with the County of San Bernardino, and number of children under age 6, still living in home.

CHAPTER THREE

ANALYSIS AND DISCUSSION

Analysis

The data set was screened for obvious data entry errors and anomalies, and analyses were conducted using SPSS. Frequency analyses and descriptives were run on all variables and questionnaires to screen for missing data, skewness, and kurtosis, all were normally distributed with values ranging between -1 and 1. Alpha reliability tests were run for the Brown Locus of Control Survey, the Bem Sex-Role Inventory, and the Leadership Career Intentions Scale. Alpha reliabilities were also run on each construct within each scale: Internal Locus of Control, External-Others Locus of Control, External-Social Locus of Control, Masculine Sex-Role Inventory, and Feminine Sex-Role Inventory. Reliabilities were run to examine current reliability of the sample and to see if the psychometrics of each survey was comparable to previous research.

The current literature suggests multiple approaches for testing mediation, which include the use of partial correlations and hierarchical regressions. Therefore, bivariate correlations and partial correlations were run

to examine the hypothesized mediated relationship between sex-role orientation and leadership career intentions by locus of control (Bobko, 1995). Linear regression analyses and a Sobel Test (Preacher & Leonardelli, 2001) were also run and analyzed to assess possible mediation by use of alternative statistical methods.

Results

Prior to analysis, each item from the Brown Locus of Control Scale, the Bem Sex-Role Inventory, the Leadership Career Intentions Scale, as well as the variables gender, race, age, number of employees supervised, number of hours on the job per week, highest education completed, years employed with current organization, job title, and number of children under age six living at home, were examined for out of range values, missing data, skewness and kurtosis. The variables and scale items were examined separately for the 80 employees sampled from the County of San Bernardino.

Data Screening

Of the eighty-five participants who volunteered for the current study, five were found to have significant missing data and were subsequently removed from the sample, new N = 80. No patterns of missing data were

identified; however, eight participants were found to have one item in the Block Locus of Control Scale missing; and the overall scales were calculated. No missing data replacement techniques were utilized. Items within each survey contained skewness and kurtosis; however, no total surveys possessed skewness or kurtosis values exceeding ± 1.0 . Therefore, no transformation was warranted.

Table 1. Bivariate Correlations

		Leadership Career Intentions Scale	Masculinity Sex-Role Orientation	Internal Locus of Control
Leadership Career	Pearson Correlation	1.000	.391**	.084
Intentions Scale	Sig. (2-tailed)		.000	.457
	N	80	80	80
Masculine Sex-Role Orientation	Pearson Correlation	.391**	1.000	.370**
	Sig. (2-tailed)	.000	.	.001
	N	80	80	80
Internal Locus of Control	Pearson Correlation	.084	.370**	1.000
	Sig. (2-tailed)	.457	.001	.
	N	80	80	80

** Correlation is significant at the 0.01 level (2-tailed).

Mediation Statistics

In order to analyze the mediation hypothesis, two statistical procedures were utilized: Partial Correlations and a Multiple Regression Analysis using the Sobel Test.

Both methods were assessed due to a salient criticism regarding the usage of just Partial Correlations. Baron and Kenny (1986) have concluded that when testing for mediated relationships, Partial Correlations often over-estimate the effect of the mediator. Therefore, a more conservative test was used, the Sobel Test, to alleviate possible concerns, and ensure that the mediated relationship was estimated correctly.

Beginning with Partial Correlations, the Bivariate Correlation between females' Masculine Sex-Role Orientation and Leadership Career Intentions was first examined. The results of the correlation analyses were statistically significant at $r = .391$, $p < .01$. Next, the partial correlation between females' Masculine Sex-Role Orientation and Leadership Career Intentions controlling for Internal Locus of Control was analyzed.

When the mediated partial correlation coefficient was examined, the results indicated that females' Masculine Sex-Role Orientation and their Leadership Career Intentions, while controlling for Internal Locus of Control, remained statistically significant at partial $r = .388$, $p < .001$. Therefore, based on this data, no significant mediated relationship emerged due to the relationship between Masculine Sex-Role Orientation and

Leadership Career Intentions remaining statistically significant after all unique variance accounted for by Internal Locus of Control was removed.

After the bivariate and partial correlations were calculated, a Multiple Regression analysis using the Sobel Test was then analyzed. The procedures to perform this regression analysis, outlined by Preacher and Leonardelli (2001), were followed. First, it was necessary to examine the proposed mediating effects, which stated that mediation can occur when four things happen:

- 1) The independent variable significantly affects the mediator, 2) The independent variable significantly affects the dependent variable in the absence of the mediator, 3) The mediator has a significant unique effect on the dependent variable and 4) The effect of the independent variable on the dependent variable shrinks upon the addition of the mediator to the model. (Preacher & Leonardelli, 2001, p. 1)

By utilizing the formal mediation assessment of the Sobel Test, statistical significance should emerge if a mediated relationship exists.

Based on this method, the analyses conducted will follow in the respective order outlined in the previous paragraph. First, the regression coefficient between Masculine Sex-Role Orientation and Internal Locus of Control was analyzed. The results indicated a significant positive relationship with, $r = .370$, $p < .01$.

Second, the regression coefficient between Masculine Sex-Role Orientation and Leadership Career Intentions, in the absence of Internal Locus of Control, was calculated and a significant positive relationship emerged, $r = .391$, $p < .01$.

Third, the regression coefficient between Internal Locus of Control and Leadership Career Intentions was examined, and the results indicated with $r = .084$, $p = .457$, no significantly unique effect of Internal Locus of Control on Leadership Career Intentions was found. Because no statistically significant relationship emerged in the current study between the hypothesized mediator and the dependent variable, the literature suggest that no further calculations are necessary. However, for the purposes of this study, regardless of the third assumption not being fulfilled, a Sobel Test was assessed for exploration purposes.

Therefore, to test the fourth criteria of the mediated relationship, two Linear Regressions were analyzed and the resulting numbers were applied to calculate the Sobel Test at

$$z\text{-value} = a*b/\text{SQRT}(b^2*sa^2 + a^2*sb^2) \text{ [MacKinnon \& Dwyer, 1994; MacKinnon, Warsi, \& Dwyer, 1995].}$$

To test the effect of Masculine Sex-Role Orientation on Leadership Career Intentions with the addition of the mediator to the model, a Linear Regression analysis was first calculated to examine the relationship between females' Masculine Sex Role Orientation and their Internal Locus of Control. The Unstandardized Coefficients were $b = .303$ with a Standard Error of $.086$. Then, a Linear Regression analysis was calculated to analyze the predictive relationship between both Masculine Sex-Role Orientation and Internal Locus of Control and Leadership Career Intentions. The Unstandardized Coefficients for females' Masculine Sex Role Orientation was $b = .405$ with a Standard Error of $.110$, and females' Internal Locus of Control was $b = -.083$ with a Standard Error of $.134$.

When the Sobel Test was conducted, the z scores equaled $-.61$, $p = .542$. These results indicated that the hypothesized relationship of females' Masculine Sex-Role Orientation and Leadership Career Intentions, mediated by Internal Locus of Control, was not statistically significant.

Post-Hoc Analyses

After all proposed hypotheses were examined, three sets of post hoc analyses were run. First, additional

concerns regarding a possible mediation effect with the remaining two dimensions of the locus of control variable, External-Others and External-Social, were addressed by assessing a series of post-hoc analyses. Second, the demographic variables were analyzed to gain insight into the sample that volunteered for the current study, and for possible explanations for the lack of mediation. And third, because two modes of assessment were utilized: computer and paper-and-pencil, possible significant mean differences were examined. Each analysis will be discussed in their respective order in the following paragraphs.

First, a possible relationship between Masculine Sex-Role Orientation and Leadership Career Intentions mediated by External-Social Locus of Control was examined using Partial Correlations. The relationship between females' Masculine Sex-Role Orientation and Leadership Career Intentions was initially investigated by examining the Bivariate Correlation between both variables. Again, the results of the correlation coefficient was statistically significant with $r = .391$, $p < .01$.

Next, the Partial Correlations between females' Masculine Sex-Role Orientation and Leadership Career Intentions controlling for External-Social Locus of Control were analyzed. The results of the Partial

Correlation coefficients between Masculine Sex-Role Orientation and Leadership Career Intentions, controlling for External-Social Locus of Control, were statistically significant, partial $r = .389$, $p < .01$. These results indicate no significant mediated relationship; therefore leading to the conclusion that no unique amount of variance is accounted for by females' External-Social Locus of Control in the relationship between Masculine-Sex Role Orientation and Leadership Career Intentions.

Next, the speculated relationship between Masculine Sex-Role Orientation and Leadership Career Intentions mediated by External-Others Locus of Control was examined. The Bivariate Correlation between females' Masculine Sex-Role Orientation and Leadership Career Intentions again was computed first. Statistical significance was found with $r = .391$, $p < .01$.

Subsequently, the Partial Correlations between females' Masculine Sex-Role Orientation and Leadership Career Intentions controlling for External-Others Locus of Control was analyzed. The results of the Partial Correlation coefficients between Masculine Sex-Role Orientation and Leadership Career Intentions were statistically significant at partial $r = .385$, $p < .01$. Based on these results, no significant mediated

relationship emerged due to the significance between female's Masculine Sex-Role Orientation and Leadership Career Intentions remaining statistically significant. No unique amount of variance was accounted for by External-Other Locus of Control.

Additionally a statistically significant relationship between females' Masculine Sex-Role Orientation and External-Others Locus of Control was found with $r = -.297$, $p < .01$. These results confirm previous literature that the more masculine sex-role characteristics a female has, the less she believes that forces outside of her control, specifically friends, peers, etc., affect the outcome of her life.

Finally, Bivariate Correlations were examined between all continuous demographic variables: age, years employed with current organization, number of children under age 6 living at home, and all assessment tools: Masculine and Feminine Sex-Role Orientation; Internal, External-Social and External-Others Locus of Control; and Leadership Career Intentions Scores. Of the variables explored, Age and Leadership Career Intentions were the only variables significantly correlated at $r = -.223$, $p < .05$. As the females' age increased, their leadership career intentions significantly decreased.

Finally because the questionnaire was administered in two modes: computer and Paper-and-Pencil, three ANOVA's were run to determine if a significant difference existed depending on the type of survey that was received. No significant mean differences emerged: Leadership Career Intentions, $F(1,78) = 3.332$, $p = .072$ with a paper-and-pencil mean = 3.79 and a computer based mean = 3.52; Internal Locus of Control, $F(1,78) = 3.924$, $p = .051$ with a paper-and pencil based mean = 4.49 and a computer based mean = 4.7; Masculine Sex-Role Orientation, $F(1,78) = 1.685$, $p = .198$, with a paper-and-pencil based mean = 5.03 and a computer based mean = 4.83.

Discussion

The current study has advanced our knowledge of female leadership career intentions and has shed some light as to how Masculine Sex-role Orientation and both Internal and External locus of control are related to females' overall career aspirations. These findings have portrayed that at least one individual difference can aid females in believing strongly enough in their own abilities to persist in their intentions to succeed.

The results indicated support for the first two Hypotheses; however, Hypothesis three and four were not

supported. When the Bivariate Correlations between females' Masculine Sex-Role Orientation and Internal Locus of Control were assessed, a significant positive correlation emerged ($r = .370$, $p < .01$) thus supporting Hypothesis 1. The more masculine sex-role characteristics a female identifies with, the higher internal locus of control she will possess. This was concurrent with the previous literature. Next, Hypothesis 2 was also supported when the Bivariate Correlation between Masculine Sex-Role Orientation and Leadership Career Intentions was examined. The results showed a significant positive correlation ($r = .391$, $p < .01$). These results support the notion that the more masculine sex-role characteristics a female identifies with, the higher her leadership career intentions would be.

The third hypothesis; however, was not supported. When the Bivariate Correlation between Internal Locus of Control and Leadership Career Intentions was examined, but it was not significant, $r = .084$, $p = .457$. The relationship directly between these two variables had yet to be examined; therefore, there was no comparison data to reference. However, because of previous literature conveying a significant relationship between Internal Locus of Control and Masculine Sex-Role Orientation, and

Masculine Sex-Role Orientation has been found to be significantly correlated to female advancement, it seemed as if Internal Locus of Control and Leadership Career Intentions would be significantly related. Furthermore, limitations concerning the reliability of the Brown Locus of Control Instrument may have affected this relationship and will be addressed in the limitation section.

Finally, Hypothesis 4 was not statistically supported either. When both Partial Correlations and Multiple Regression utilizing the Sobel Test were assessed, a relationship between Masculine Sex-Role Orientation and Leadership Career Intentions mediated by Internal Locus of Control was not supported. When the partial correlations were assessed, the relationship between Masculine Sex-Role Orientation and Leadership Career Intentions, controlling for Internal Locus of Control, was not significantly smaller than the zero order correlation between Masculine Sex-Role Orientation and Leadership Career Intentions. Additionally, when the Sobel Test was calculated after analyzing both Linear Regressions to gather the necessary data, the z score was not significant. Both analyses support the notion that Internal Locus of Control does not account for a significant amount of variance in the relationship between Masculine Sex-Role Orientation and

Leadership Career Intentions; thus, no mediated relationship is statistically present.

Due to the fact that no mediated relationship was found when the Internal dimension of the participants' Locus of Control was examined, the two remaining constructs of Locus of Control were analyzed for reasons previously discussed. External-Others and External-Social Locus of Control were both assessed to determine whether the mediated relationship existed with any dimension of Locus of Control. After analyzing the results, no significant relationship was supported between Masculine Sex-Role Orientation and Leadership Career Intentions mediated by either External-Other or Social Locus of Control.

Finally, because no assessment tool has been developed to analyze female intentions to occupy leadership positions, the Leadership Career Intentions Scale developed for the present study shows promise for subsequent utilization. After assessing the reliability for the tool in relation to the pilot test, the alpha reliability maintained its psychometric status, resulting in an alpha reliability = .90. Furthermore, when examining the relationship of all demographic variables, and assessment tools with the Leadership Career Intentions

Scale, construct validity began to emerge. With the predictive relationship between Masculine Sex-Role Orientation and Leadership Intentions emerging as statistically significant, combined with the previous literature showing the predictive relationship of Masculine Sex-Role Orientation and Leadership Success, convergent validity seemed to be apparent.

Finally, the age variable, indicating a significantly negative relationship with the Leadership Career Intentions Scale, indicated that the variable that should not be positively correlated, was not. Age should be negatively correlated with a female's career intentions, specifically as a female gets older, a decrease in leadership career intentions makes intuitive sense. Therefore, this scale may be a good assessment tool to measure those individual differences that are influential in the process of breaking through the glass ceiling.

Implications

Because Leadership Career Intentions, and the individual variables that affect them, had yet to be examined in the female advancement literature, the results of this study provide a direction for future researchers. Scientists can now begin their quest for those individual

variables that may impact women's belief in their own capabilities, which in turn can provide women with the tools they need to surpass the glass ceiling and excel in the corporate world. This avenue should be further researched because the strong relationship between a woman's masculine sex-role characteristics and her leadership career intentions show that researching individual characteristics is a plausible avenue to journey down.

Furthermore, these results strongly indicate the salience of Masculine Sex-Role characteristics in the pursuit to find which individual variables separate those females who *intend* to advance up the corporate ladder, and those who do not. The majority of the sex-role orientation research has focused on the masculine sex-role orientation's relationship to corporate success, but without possessing higher leadership career intentions, moving up the corporate ladder is not likely to be an option (Brown & Marcoulides, 1996; Lombardo & Kemper, 1992; Powell, 1999). Therefore, without assessing individual differences and female leadership career intentions, the "How?" question, in regards to what is different about those females who break through the glass ceiling, would still remain.

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Additionally, these results may add insight into which females ultimately succeed in the corporate world. Because the present study found Masculine Sex-Role characteristics to be significantly predictive of female Leadership Career Intentions, $F(1,78) = 14.05, p < .01$, and have also been found to be statistically significant in relation to Corporate success, it allows an argument to be made that female's leadership career intentions will likely translate into attaining leadership corporate positions (Brown & Marcoulides, 1996; Reavley, 1989; Schein, 1975; Sachs, Chrisler, & Devin, 1992).

However, this study did not provide support for the assumption that internal locus of control is a critical factor that mediates a woman's sex-role orientation and her career advancement intentions. Based on the limitations of this study, including low reliability on the tool used to assess the mediating variable and the population that was sampled from, a mediated relationship may still have merit for further analysis. Future research should continue to investigate the role of Locus of Control in female Leadership Career Intentions and this notion will be expanded upon at a later time.

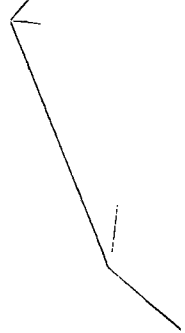
Finally, although many feel as if Corporate America could be more embracing of certain female attributes, the

females may also need to begin embracing the notion that certain qualities are necessary to be successful in the business arena: regardless if one is male or female.

Sexual discrimination may continue to reside in the heart of organizations until females can "prove" that they are worthy of this belief system being altered. Uncovering these findings are not reasons for society to stop progressing toward a discrimination free corporate world, but they do support the notion that more focus should be placed on the power of the individual female. If females in our business industry have been searching for an answer to their advancement prayers, the results of this study may suggest that the answer has been within them all along.

Limitations

Numerous possible limitations have been identified that may have impacted the results of this study. First, one of the most significant limitations was the low reliability of the Brown Locus of Control Scale. With previous literature reporting alpha reliability results in the .80 range and above, the current results found the measurement tool's reliability to merely be in the .60 range. One reason for the low reliability could be due to



the actual items of the assessment tool. As previously stated, after examining the reliability of the Internal dimension, the item total correlation for item #9 was negative and was subsequently thrown out. Furthermore, after assessing the results of a factor analysis, three strong dimensions were not apparent. This alluded to the lack of ability to strongly tap into each construct that the tool was tapping into.

Finally, it was speculated that reverse scoring was needed and was overlooked; however, no reverse scoring was required nor necessary. So, because the construct that was measured by the Brown Locus of Control Scale was the hypothesized mediator, the lack of a significant mediated relationship may have been due to the psychometric limitations of the tool utilized for this study.

A second limitation of the current study was in regards to the sample the participants were chosen from. After assessing the participants, it was found that there was a severe restriction of range in two main areas.

First, the majority of the sample assessed had a higher "Masculine" Sex-Role Orientation, which would also be reason for a lack of mediation to occur with Locus of Control. Specifically, 83.8% of the population had scores above 4.3 on the Masculinity Dimension, and only 12.5% of

the females' surveyed had a comparably high feminine scores. A possible explanation for this effect could be due to the fact that maintaining masculine characteristics are more highly accepted in our society today. Additionally, because all participants volunteered to complete the training courses sampled from, the sample was demonstrating behavior that was in alignment with more masculine sex characteristics. Due to the restricted variance in this variable, differences due to the mediator would be less apparent.

The second range restriction, as previously stated, was that participants voluntarily signed up for these training courses. There may be certain masculine sex-role oriented personality characteristics present, or other traits not accounted for, in those participants who desired to further their skills by taking and completing professional training courses. This could have explanatory potential regarding the heavy "Masculine" sex-typed sample because those characteristics found in this sex-role orientation are also those that might drive an individual to further her professional knowledge.

A third potential limitation was found when assessing the relationship between the age of the participants and Leadership Career Intentions. Age was significantly

related to Leadership Career Intentions in a negative direction, $r = -.223$, $p < .05$. In this study, as the females' age increased, their leadership career intentions significantly decreased. This finding may have significant explanatory potential. Since the Mean age of the participants was 39.5 years of age, and based on the fact that over 50% of the sample was between 41-59 years of age, their future intentions for career aspirations may have also been confounded due to cohort effects. Ulterior life plans and subsequently retirement is being more thoroughly examined at this age rather than leadership career aspirations.

A fourth possible limitation was due to the type of organization sampled. Since the County of San Bernardino is a public organization, the internal rules of career advancement are quite unique. Whereas the private industries, where much of the comparison data has been retrieved, have a clear vertical corporate ladder, the County does not. Many of the promotions are lateral in nature, meaning most employees do not promote within their own unit, but are moved to a new unit and given a new status in that unit. Therefore, when discussing promotion to the Executive ranks, for many, this is not an option to attain. The majority of those who are in the executive

ranks, Chief Administrative Operator, etc., are those who have received their education specifically in public administration. Therefore, there are few "corporate ladders" in the County of San Bernardino and only one is truly linked to the Executive Ranks.

Finally, the culture of the County of San Bernardino may provide an appealing environment for employees who have lower overall leadership career intentions based on the rationale previously stated. The County System is one in which a 40 hour week is the norm, work is rarely taken home to complete over the weekend, and the compensation benefits are extremely attractive. All variables combined create a nice atmosphere for those employees who want to work, but are not interested in the "rat race" or moving up the Executive Ranks. It has a lifestyle that is appealing for those who enjoy starting their jobs at 7:30a.m. and completing them at 5:00p.m. without any outside concerns.

Furthermore, employees in general do not believe there to be ample advancement opportunities at the County of San Bernardino due to the perception that the "forces outside of their control" determine their career path. This type of organizational culture often creates an environment in which many employees believe promotions

only occur in one of two circumstances. The first situation is one in which the employee has studied public administration, has chosen to run for the political office, and has been politically appointed to the executive ranks. Or second, for those employees who are not executive "bound" but may want to promote within their unit, many employees believe that advancement will only happen if the Executive Ranks have deemed it to be so.

Therefore, this may be influential when examining the variable of Locus of Control. For many females and males alike, one's career path is perceived to be in the hands of the upper management, and would have an impact of the percentage of the sample that possessed an internal locus of control and higher leadership career intentions. In accordance with this notion, the Attraction-Selection-Attrition model by Schneider (1987) would suggest that those females interested in career advancement would leave the County of San Bernardino in search of an occupation that would give her leadership promotional opportunities. Consequently, those females who remained at the County would most likely have a stronger External locus of control, thus lower leadership career intentions.

Future Research

Because this area of research is innovative, there are many research areas that can be examined in the future. First, the study should be replicated utilizing a different measurement tool for Locus of Control. A new tool should be chosen that has similar reported psychometrics, but has been measured for a longer period of time, and has a broader and more reliable psychometric history. Although a mediated relationship was not supported, the measurement tool utilized may not have been psychometrically sound enough to provide accurate results.

Second, this study should be replicated in a private industry setting with a clear corporate ladder. Because much of the Locus of Control and Sex-Role Orientation literature has been completed in the private industry, significant differences may be found between females in public organizations as compared to females in private organizations. This would also be extremely insightful when examining what type of careers females in each organization choose, and the type of training that each type of organization: public or private, warrants for their females desiring leadership positions.

Third, because the restriction in the age of the participants may have been a confounding variable, a

sample may be drawn in future studies that represents a larger range of ages. This may remove the possible effects that were presented in the current study, and would increase the amount of age variance which would lend to the possibility of finding the proposed mediated relationship.

Finally, because this research is looking directly at females' Leadership Career Intentions, a future study that examined the same employees and whether or not they sought out and occupied leadership positions would be highly informative. In addition to giving strength to the present findings, this would also give additional information into the relationship between leadership career intentions and success in the corporate world.

APPENDIX A
INFORMED CONSENT

INFORMED CONSENT

Dear Participant:

Thank you for agreeing to participate in this Career Advancement Study, which is being conducted by Kendall Kerekes, as part of her graduate work, under the supervision of Dr. Janelle Gilbert. This project is being conducted in order to examine employee advancement intentions at the County of San Bernardino. We ask that you please give careful consideration to each item and respond as accurately and honestly as possible.

The questionnaire should take approximately 20 minutes of your time, and your answers will be kept strictly anonymous. You are not asked to provide your name and the results will be reported in aggregate form only. Your responses will be used only to examine the general career advancement intentions for employees in the corporate arena. Please keep in mind that your participation is voluntary and you may withdraw without penalty at any time.

The Department of Psychology Institutional Review Board of California State University, San Bernardino, has approved this project. If you have any questions regarding the nature of this study, or wish to receive a copy of the results, please feel free to contact Kendall Kerekes at (909) 880-5587, after June 15, 2002. Your participation is greatly appreciated.

Sincerely,

Kendall Kerekes
Student Researcher

Janelle Gilbert, Ph.D.
Professor

I have read the above description and understand the study's nature and purpose. I agree to participate in the following study.

Please check _____ and Date _____.

APPENDIX B
DEBRIEFING STATEMENT

Debriefing Statement

Dear participant:

Thank you for participating in this project. As indicated my goal was to investigate female career advancement intentions in the corporate world. The purpose of this study was to examine whether personality variables have an impact on female leadership career intentions. The data from the male participants may be used for comparisons between gender. As your name was not requested, your responses are anonymous and will only be reported in aggregate form.

We do request that you not reveal the nature of this study to other potential participants, as it might bias the results.

If you have any further questions regarding the nature of this study or would like to receive a copy of the results when they become available (after June 15, 2002), please contact Kendall Kerekes at (909) 880-5587.

APPENDIX C
BROWN LOCUS OF CONTROL SCALE

Brown Locus of Control Scale

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. My friendships depend on how well I relate to others.	1	2	3	4	5	6
2. Accidental happenings have a lot to do with my life.	1	2	3	4	5	6
3. Rules and practices that have been around for many years should determine what will happen to my life.	1	2	3	4	5	6
4. I am fairly able to determine what will happen to my life.	1	2	3	4	5	6
5. Religious faith will get me through hard times.	1	2	3	4	5	6
6. The government will run whether I get involved or not.	1	2	3	4	5	6
7. Getting ahead is a matter of pleasing people in power.	1	2	3	4	5	6
8. Generally it's not what I know, but who I know.	1	2	3	4	5	6
9. I make mistakes – accidents just don't happen.	1	2	3	4	5	6
10. Being in the right place at the right time is important for my success.	1	2	3	4	5	6
11. My friends often determine my actions.	1	2	3	4	5	6
12. The ideas about life that have been around since time began have an influence on my life.	1	2	3	4	5	6
13. Most of the time, I control what happens in my life.	1	2	3	4	5	6

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
14. Strong pressure groups determine my role in society.	1	2	3	4	5	6
15. My plans will not work unless they fit into the plans of those in power.	1	2	3	4	5	6
16. My close relationships with people don't just happen – they need to be worked on.	1	2	3	4	5	6
17. Some powerful force or person predetermined most of what happens in my life.	1	2	3	4	5	6
18. My life is often affected by fate.	1	2	3	4	5	6
19. My actions determine my life.	1	2	3	4	5	6
20. Hard work will get me where I want to go.	1	2	3	4	5	6
21. I can generally take care of my personal interests.	1	2	3	4	5	6
22. I have to work with others to get a job done.	1	2	3	4	5	6
23. My ability without pleasing people in power makes little difference.	1	2	3	4	5	6
24. My life is often affected by luck.	1	2	3	4	5	6
25. I can usually carry out plans that I make for myself.	1	2	3	4	5	6

APPENDIX D
BEM SEX-ROLE INVENTORY SCALE

Bem Sex-Role Inventory Scale

	Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true
1. Defend my own beliefs	1	2	3	4	5	6	7
2. Affectionate	1	2	3	4	5	6	7
3. Conscientious	1	2	3	4	5	6	7
4. Independent	1	2	3	4	5	6	7
5. Sympathetic	1	2	3	4	5	6	7
6. Moody	1	2	3	4	5	6	7
7. Assertive	1	2	3	4	5	6	7
8. Sensitive to needs of others	1	2	3	4	5	6	7
9. Reliable	1	2	3	4	5	6	7
10. Strong personality	1	2	3	4	5	6	7
11. Understanding	1	2	3	4	5	6	7
12. Jealous	1	2	3	4	5	6	7
13. Forceful	1	2	3	4	5	6	7
14. Compassionate	1	2	3	4	5	6	7
15. Truthful	1	2	3	4	5	6	7
16. Have leadership abilities	1	2	3	4	5	6	7
17. Eager to soothe hurt feelings	1	2	3	4	5	6	7
18. Secretive	1	2	3	4	5	6	7
19. Willing to take risks	1	2	3	4	5	6	7
20. Warm	1	2	3	4	5	6	7
21. Adaptable	1	2	3	4	5	6	7
22. Dominant	1	2	3	4	5	6	7
23. Tender	1	2	3	4	5	6	7

	Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true
24. Conceited	1	2	3	4	5	6	7
25. Willing to take a stand	1	2	3	4	5	6	7
26. Love children	1	2	3	4	5	6	7
27. Tactful	1	2	3	4	5	6	7
28. Aggressive	1	2	3	4	5	6	7
29. Gentle	1	2	3	4	5	6	7
30. Conventional	1	2	3	4	5	6	7
31. Self-reliant	1	2	3	4	5	6	7
32. Yielding	1	2	3	4	5	6	7
33. Helpful	1	2	3	4	5	6	7
34. Athletic	1	2	3	4	5	6	7
35. Cheerful	1	2	3	4	5	6	7
36. Unsystematic	1	2	3	4	5	6	7
37. Analytical	1	2	3	4	5	6	7
38. Shy	1	2	3	4	5	6	7
39. Inefficient	1	2	3	4	5	6	7
40. Make decisions easily	1	2	3	4	5	6	7
41. Flatterable	1	2	3	4	5	6	7
42. Theatrical	1	2	3	4	5	6	7
43. Self-sufficient	1	2	3	4	5	6	7
44. Loyal	1	2	3	4	5	6	7
45. Happy	1	2	3	4	5	6	7
46. Individualistic	1	2	3	4	5	6	7
47. Soft-Spoken	1	2	3	4	5	6	7

	Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true
48. Unpredictable	1	2	3	4	5	6	7
49. Masculine	1	2	3	4	5	6	7
50. Gullible	1	2	3	4	5	6	7
51. Solemn	1	2	3	4	5	6	7
52. Competitive	1	2	3	4	5	6	7
53. Childlike	1	2	3	4	5	6	7
54. Likable	1	2	3	4	5	6	7
55. Ambitious	1	2	3	4	5	6	7
56. Do not use harsh language	1	2	3	4	5	6	7
57. Sincere	1	2	3	4	5	6	7
58. Act as a leader	1	2	3	4	5	6	7

59. Feminine	1	2	3	4	5	6	7
60. Friendly	1	2	3	4	5	6	7

APPENDIX E
LEADERSHIP CAREER INTENTIONS
SCALE

Leadership Career Intentions Scale

Scale 1:

	Highly Unlikely	Somewhat Unlikely	Slightly Unlikely	Agree	Somewhat Likely	Highly Likely
1. How likely is it that your occupation will become the primary focus of your energy?	1	2	3	4	5	6
2. How likely is it that you would feel uncomfortable if you held a traditionally male occupation, that is, one in which women were a clear minority?	1	2	3	4	5	6
3. How likely is it that you would work longer hours in order to finish an important assignment on time?	1	2	3	4	5	6
4. How likely is it that you would seek out information or training that would increase your chances for promotion?	1	2	3	4	5	6
5. How likely is it that you would take the "lead role" on a project at work?	1	2	3	4	5	6
6. If given the opportunity, how likely it is that you would take a new job assignment that is challenging and may provide advancement opportunities?	1	2	3	4	5	6
7. How likely is it that you would choose a task that you are familiar with and are assured to accomplish correctly?	1	2	3	4	5	6
8. How likely is it that you would seek out an executive position in your company?	1	2	3	4	5	6
9. How likely is it that you would seek out an entry-level supervisory position in your company?	1	2	3	4	5	6

	Highly Unlikely	Somewhat Unlikely	Slightly Unlikely	Agree	Somewhat Likely	Highly Likely
10. How likely is it that you would seek out an upper-management position in your company?	1	2	3	4	5	6
11. How likely is it that you would seek out a clerical position in your company?	1	2	3	4	5	6
12. How likely is it that you would be satisfied to stay in your current position?	1	2	3	4	5	6
13. How likely is it that you would find new tasks if you have finished all those currently assigned?	1	2	3	4	5	6
14. How likely is it that you would ask your boss about ways to better your performance?	1	2	3	4	5	6
15. How likely is it that you would search for a new company if you felt you could not advance in your current job?	1	2	3	4	5	6
16. How likely is it that you would try a task that you have never tried before?	1	2	3	4	5	6

Scale 2:

	Not At All	Small Degree	Moderate Degree	Great Degree	Completely
17. To what degree do you envision yourself becoming the CEO of a company?	1	2	3	4	5
18. To what degree do you create career plans that include multiple promotions?	1	2	3	4	5
19. To what degree is your occupation an important source of satisfaction in your life?	1	2	3	4	5
20. To what degree do you feel that the goal of being an organizational leader is attainable?	1	2	3	4	5
21. To what degree do you plan on applying for executive positions?	1	2	3	4	5
22. To what degree do you see yourself going to the top of the corporate ladder?	1	2	3	4	5
23. To what degree do you strive to hold the highest position in a company such as Chief Executive or Board of Directors?	1	2	3	4	5
24. To what degree do you see yourself in a position where all employees answer to you?	1	2	3	4	5
25. To what degree do you see yourself making decisions in a company that will influence the future direction of the company?	1	2	3	4	5
26. To what degree do you enjoy having little responsibility in your organization?	1	2	3	4	5

APPENDIX F
DEMOGRAPHICS

Demographics

Please place one check mark next to the answer that applies to you. (Ex: X)

1. Gender:
☐ Male
☐ Female
2. Race:
☐ Caucasian
☐ Hispanic
☐ Asian
☐ African American
☐ Pacific Islander
☐ Native American
☐ Other (Please Fill In) _____
3. Age:
☐ (Please fill in)
4. Number of employees you supervise:
☐ None
☐ 1-10
☐ 11-30
☐ 31-50
☐ 51-80
☐ 80-100
☐ 100+
5. Number of hours on job per week
☐ 10-20
☐ 20-30
☐ 30-40
☐ 40-50
☐ 50-60
☐ 60+
6. Highest Education completed:
☐ Grade School (completed 8th grade)
☐ High School (completed 12th grade)
☐ College Degree (obtained a BA or BS)
☐ Post Graduate Degree (obtained a Masters or Ph.D.)
☐ Other (Please Fill In) _____

7. Years employed with current organization
_____ (Please round to nearest whole year)
8. Job Title
_____ (Please fill in)
9. Number of children, **under age 6**, you have living at home:
_____ (Please fill in)

APPENDIX G

ITEM TOTAL CORRELATIONS

LEADERSHIP CAREER INTENTION

SCALE

Reliability Analysis - Scale (Alpha)

	Mean	Std Dev	Cases
RECARER1	3.1375	1.3477	80.0
RECARER7	3.7375	1.5323	80.0
RECARER8	2.9125	1.4337	80.0
RECARE22	3.9750	1.0431	80.0
C2	4.3125	.4238	80.0
C3	4.4125	.8815	80.0
C4	4.6625	.5724	80.0
C5	3.7750	1.3960	80.0
C6	3.9375	1.3626	80.0
C9	4.7750	.4493	80.0
C10	4.3250	.9109	80.0
C11	4.1000	1.2488	80.0
C12	4.6250	.6033	80.0
C13	2.3125	1.3178	80.0
C14	3.2000	1.2159	80.0
C15	3.6875	.8049	80.0
C16	3.6000	1.0838	80.0
C17	3.1125	1.3594	80.0
C18	2.7750	1.3499	80.0
C19	2.3500	1.3880	80.0
C20	2.7000	1.3063	80.0
C21	3.1375	1.2803	80.0

Correlation Matrix

	RECARER1	RECARER7	RECARER8	RECARE22	C2
RECARER1	1.0000				
RECARER7	.1035	1.0000			
RECARER8	-.1444	-.0509	1.0000		
RECARE22	.0385	.0909	-.0015	1.0000	
C2	-.0873	.1962	.0560	.1611	1.0000
C3	.1434	.2967	-.0111	.1215	.4130
C4	-.1852	.0709	.2103	.0917	.3620
C5	.1714	.2087	.1861	.0830	.2701
C6	.2391	.2830	.3341	.1592	.1548
C9	.3235	-.1420	-.1488	-.0932	-.0914
C10	.0456	-.0923	.0124	.1419	.0943
C11	-.0835	-.0920	.2312	.0700	.0359
C12	.0954	.1113	.1079	.2464	.0681
C13	.0040	.1414	.3898	.1439	.2876
C14	.1684	.2120	.2933	.1437	.2702
C15	.1451	.2918	-.1008	.2921	.1971
C16	.2097	.2729	.1108	.2083	.2480
C17	.1365	.2088	.3169	.2073	.3667
C18	.0868	.1608	.3494	.2477	.3236
C19	.0755	.1152	.3845	.1985	.2636
C20	.1100	.1309	.2426	.0873	.2630
C21	.1723	.2445	.2273	.2206	.3748

	C3	C4	C5	C6	C9
C3	1.0000				
C4	.3296	1.0000			
C5	.5290	.2839	1.0000		
C6	.3800	.3459	.7777	1.0000	
C9	.1414	-.1021	-.0616	-.0439	1.0000
C10	.3827	.2373	.2076	.2511	.2428
C11	.1345	.4197	.3689	.3161	-.1850
C12	.1756	.3253	.1541	.3407	.1051
C13	.2908	.2758	.6167	.5186	-.0294
C14	.3236	.2619	.6085	.5883	-.0093
C15	.2732	.1253	.2408	.1897	-.0219
C16	.3922	.0530	.5304	.4457	-.0676
C17	.3833	.3259	.7272	.6735	.0212
C18	.3875	.3264	.6311	.5979	-.0219
C19	.3047	.2780	.5769	.5337	.0670
C20	.3727	.3369	.5734	.4800	.0992
C21	.4763	.2196	.5771	.5202	.0985

	C10	C11	C12	C13	C14
C10	1.0000				
C11	.0601	1.0000			
C12	.3167	.2016	1.0000		
C13	.2307	.2884	.2926	1.0000	
C14	.3063	.2368	.2071	.6636	1.0000
C15	.1921	-.0315	.1206	.2245	.3751
C16	.1949	.2955	.1549	.4077	.4438
C17	.2257	.3587	.2528	.7291	.7827
C18	.2043	.3890	.2526	.7516	.7527
C19	.2593	.3666	.2948	.8183	.6630
C20	.3596	.2437	.4016	.7905	.6838
C21	.3411	.2051	.2643	.7545	.7302

	C15	C16	C17	C18	C19
C15	1.0000				
C16	.3627	1.0000			
C17	.3911	.5911	1.0000		
C18	.4238	.5485	.8969	1.0000	
C19	.2691	.4594	.7571	.7925	1.0000
C20	.2468	.3773	.7036	.7150	.8126
C21	.3984	.5309	.7547	.7506	.7134

	C20	C21
C20	1.0000	
C21	.7440	1.0000

Reliability Analysis Scale (Alpha)
N of Cases = 80.0

Statistics for	Mean	Variance	Std Dev	N of Variables	
Scale	80.2625	210.1201	14.4955	22	
Item Means	Mean	Minimum	Maximum	Range	Max/Min Variance
	3.6483	2.3125	4.8125	2.5000	2.0811/.6084

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
RECARER1	77.1250	202.8956	.1409	.3282	.9076
RECARER7	76.5250	198.1259	.2236	.2236	.9070
RECARER8	77.3500	197.0911	.2726	.3779	.9047
RECARE22	76.2875	202.3847	.2240	.2387	.9035
C2	75.4500	205.7190	.3473	.4053	.9012
C3	75.8500	196.9139	.5024	.6038	.8977
C4	75.6000	203.7367	.3706	.5255	.9005
C5	76.4875	180.6074	.7346	.8254	.8908
C6	76.3250	181.8677	.7182	.7827	.8914
C9	75.4875	209.8733	.0035	.3650	.9043
C10	75.9375	201.0973	.3171	.4303	.9012
C11	76.1625	196.9986	.3298	.4851	.9020
C12	75.6375	203.4745	.3650	.4105	.9005
C13	77.9500	181.1367	.7681	.8025	.8900
C14	77.0625	181.0973	.7763	.7130	.8903
C15	76.5750	200.7032	.3845	.4259	.8999
C16	76.4625	191.0872	.5960	.5250	.8953
C17	77.1500	176.6861	.8740	.8838	.8867
C16	77.4875	177.6454	.8519	.6731	.8874
C19	77.9125	178.5366	.7995	.8154	.8888
C20	77.5625	181.5657	.7627	.8183	.8902
C21	77.1250	180.4905	.8137	.7783	.8889

Reliability Coefficients 22 items

Alpha = .9014

Standardized item alpha = .8955

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